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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				PE 0101226N: <i>Submarine Acoustic War Dev</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	6.704	6.815	6.360	-	6.360	6.438	6.564	6.699	6.843	Continuing	Continuing
1265: <i>Sub Defensive Warfare</i>	6.704	6.815	6.360	-	6.360	6.438	6.564	6.699	6.843	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project develops a Submarine Defensive Warfare System (SDWS) to improve the effectiveness and survivability of all U.S. Submarine classes.

This project funds the Next Generation Countermeasure (NGCM) efforts entailing simulating and determining the effectiveness of new technologies and capabilities developed under the Future Naval Capabilities (FNC), Small Business and Innovative Research (SBIR), and other RDT&E initiatives. New and emerging hardware and software are rigorously evaluated in a representative acoustic environment, through both digital and hardware-in-the-loop simulations, to determine their readiness for inserting this technology into the NGCM.

This Mod X project develops Engineering Change Proposal (ECP) for ADC MK 2 to improve the effectiveness of the 3"-diameter anti-torpedo countermeasure adding enhanced capabilities that have been developed under ONR's Future Naval Capability (FNC) program. The key new capabilities to be inserted to the current countermeasure are adaptive countermeasure (ACM) with a full duplex and mobility.

Funding provides In-Service Engineering Agent and Technical Design Agent hardware/software support for in-service CSA MK 2 and CSA MK 3 systems, including obsolete unit-level Technical Refresh. Additionally, CSA MK 3 system-level modernization (TACLAN integration/Technical Insertion) has been initiated.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	7.181	6.815	6.993	-	6.993
Current President's Budget	6.704	6.815	6.360	-	6.360
Total Adjustments	-0.477	-	-0.633	-	-0.633
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.247	-			
• Program Adjustments	-	-	-0.519	-	-0.519
• Section 219 Reprogramming	-0.230	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.114	-	-0.114

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<p><u>Change Summary Explanation</u></p> <p>Technical: Not applicable.</p> <p>Schedule: Not applicable.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0101226N: Submarine Acoustic War Dev				PROJECT 1265: Sub Defensive Warfare			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
1265: Sub Defensive Warfare	6.704	6.815	6.360	-	6.360	6.438	6.564	6.699	6.843	Continuing	Continuing
Quantity of RDT&E Articles	0	0	5	0	5	0	0	0	0		
A. Mission Description and Budget Item Justification											
This project develops a Submarine Defensive Warfare System (SDWS) to improve the effectiveness and survivability of all U.S. Submarine classes. This project funds the Next Generation Countermeasure (NGCM) efforts entailing simulating and determining the effectiveness of new technologies and capabilities developed under the Future Naval Capabilities (FNC), Small Business and Innovative Research (SBIR), and other RDT&E initiatives. New and emerging hardware and software are rigorously evaluated in a representative acoustic environment, through both digital and hardware-in-the-loop simulations, to determine their readiness for inserting this technology into the NGCM. This Mod X project develops Engineering Change Proposal (ECP) for ADC MK 2 to improve the effectiveness of the 3"-diameter anti-torpedo countermeasure adding enhanced capabilities that have been developed under ONR's Future Naval Capability (FNC) program. The key new capabilities to be inserted to the current countermeasure are adaptive countermeasure (ACM) with a full duplex and mobility. Funding provides In-Service Engineering Agent and Technical Design Agent hardware/software support for in-service CSA MK 2 and CSA MK 3 systems, including obsolete unit-level Technical Refresh. Additionally, CSA MK 3 system-level modernization (TACLAN integration/Technical Insertion) has been initiated.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2010	FY 2011	FY 2012	
Title: Sub Defensive Warfare								6.704	6.815	6.360	
								0	0	5	
FY 2010 Accomplishments: FY2010 Accomplishments: - Continue to conduct countermeasure proofing and effectiveness analysis for designated torpedo using modeling and simulation with hardware-in-the-loop at Weapons Analysis Facility (WAF). - Conducted two Industry Days to provide high level technical information and the acquisition plan to potential NGCM bidders. NGCM proposals have been submitted to the Government two months after the Request for Proposal (RFP) was released to the industry. - Continue efforts in baselining the Test and Evaluation Master Plan (TEMP). - Awarded NGCM contracts 4Q-2010.											
FY 2011 Plans: FY2011 Plans: - Complete baselining the Test and Evaluation Master Plan (TEMP). - Conduct system requirements review, Preliminary Design Review (PDR) and Critical Design Review (CDR). - Refine NGCM-to-CSA interface requirements.											

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
<p>- The NGCM contractors start their internal Contractor Testing (CT) to refine designs.</p> <p><i>FY 2012 Plans:</i> FY2012 Plans: - Complete Contractor Testing - Begin Developmental Testing (DT) with Special Test Unit (STU) which allows the acoustic performance of the NGCM. - FY12 units are for 5 Standard Test Units.</p>			
Accomplishments/Planned Programs Subtotals	6.704	6.815	6.360

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• OPN/221000/221005: <i>Submarine Accoustic Warfare</i>	14,256.000	20,739.000	20,554.000	0.000	20,554.000	20,950.000	21,173.000	21,515.000	21,925.000	Continuing	Continuing

D. Acquisition Strategy
<p>This project develops a Submarine Defensive Warfare System (SDWS) to improve the effectiveness and survivability of all U.S. Submarine classes. The integration of technology insertion into the Next Generation Countermeasure (NGCM) and the NGCM-capable CSA MK 3 system will continue through FY12. The development and procurement will be through a full and open competition for a cost-plus-fixed-fee contract which delivers NGCM Engineering Development Models (EDMs) to the Navy. The NGCM development contracts awarded in 4Q-2010. NGCM contractors' testing will be in FY11-FY12 and the Development Testing involving the Navy will be in FY12-FY13.</p>

E. Performance Metrics
Milestone Reviews

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0101226N: Submarine Acoustic War Dev				PROJECT 1265: Sub Defensive Warfare					
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
WAF ANALYSIS SYSTEM ENGINEERING	WR	NUWC:NEWPORT, RI	9.000	1.000	Dec 2010	1.436	Dec 2011	-		1.436	Continuing	Continuing	Continuing
NGCM SYSYTEM ENGINEERING	WR	NUWC:NEWPORT, RI	12.414	0.650	Dec 2010	0.500	Dec 2011	-		0.500	Continuing	Continuing	Continuing
NGCM DEVELOPMENT 1	C/CPAF	Argon ST:Fairfax, VA	3.053	2.245	Feb 2011	1.990	Feb 2012	-		1.990	Continuing	Continuing	Continuing
NGCM DEVELOPMENT 2	C/CPAF	Ultra:Braintree, MA	3.053	2.245	Feb 2011	1.991	Feb 2012	-		1.991	0.000	7.289	
NGCM SYSTEM ENGINEERING	WR	NUWC:KEPORT, WA	0.670	0.350	Dec 2010	0.118	Dec 2011	-		0.118	Continuing	Continuing	Continuing
Subtotal			28.190	6.490		6.035		-		6.035			
Remarks NGCM Development contracts awarded 12/22/2010 to Argon ST and Ultra.													
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ACQUISITION WORKFORCE	Various	Not Specified:Not Specified	0.036	-		-		-		-	0.000	0.036	0.036
TRAVEL	WR	NAVSEA:Washington, DC	0.350	0.075	Nov 2010	0.075	Nov 2011	-		0.075	Continuing	Continuing	Continuing
PROGRAM MANAGEMENT SUPPORT	C/CPAF	TECH MARINE:BURKE, VA	0.550	0.250	Feb 2011	0.250	Feb 2012	-		0.250	Continuing	Continuing	Continuing
Subtotal			0.936	0.325		0.325		-		0.325			
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			29.126	6.815		6.360		-		6.360			
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy			DATE: February 2011
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 1265				
BASELINE TEST & EVALUATION MASTER PLAN (TEMP)	1	2010	4	2011
CONTRACT AWARD	1	2011	1	2011
INTEGRATION OF TECHNOLOGY INSERTIONS	1	2011	1	2013
PRELIMINARY DESIGN REVIEW (PDR)	4	2011	4	2011
CONTRACTOR TESTING	4	2011	4	2012
CRITICAL DESIGN REVIEW (CDR)	2	2012	2	2012
DEVELOPMENTAL TESTING (D/T)	4	2012	1	2014
MILESTONE C	3	2014	3	2014
LRIP	3	2014	1	2015
OPERATIONAL EVALUATION	1	2015	1	2015
FULL RATE PRODUCTION (FRP)	4	2015	4	2016

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